

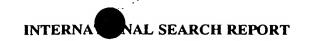
PCT

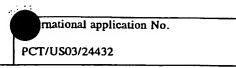
INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 110313.138WO		FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.				
International application No. PCT/US03/24432		International filing date (day/mon 04 August 2003 (04.08.2003)	uh/year) (Earliest) Priority Date (day/month/year) 07 August 2002 (07.08.2002)				
Applicant CHILDREN'S MEDICAL CENTER CORPORATION							
This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.							
This international search report consists of a total of sheets. It is also accompanied by a copy of each prior art document cited in this report.							
Basis of the Report a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item. the international search was carried out on the basis of a translation of the international application furnished to this							
b.	Authority (Rule 23.1(b)). b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the internation search was carried out on the basis of the sequence listing:						
		d application in written form.					
	furnished subsequently to th	national application in computer readable form.					
		is Authority in computer readable i	form				
ן ו		quently furnished written sequence listing does not go beyond the disclosure in the					
	international application as filed has been furnished.						
	the statement that the inform been furnished.	nation recorded in computer readab	ele form is identical to the written sequence listing has				
2.	Certain claims were found	unsearchable (See Box I).					
3.	Unity of invention is lacking (See Box II). With regard to the title, the text is approved as submitted by the applicant.						
4. \							
		ed by this Authority to read as follows:					
5. V	5. With regard to the abstract,						
	the text is approved as submi	itted by the applicant.					
֟ 	the text has been established.	the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this					
6. <u>1</u>	The figure of the drawings to be pub	No					
	as suggested by the applicant	1.	None of the figures				
اِ	because the applicant failed t	to suggest a figure.					
	because this figure better cha	aracterizes the invention.					

Form PCT/ISA/210 (first sheet) (July 1998)





Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)							
This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:							
Claim Nos.: 21-25 and 101-111 because they relate to subject matter not required to be searched by this Authority, namely: Claims 21-25 are directed cells in vivo, the scope of which encompasses a transgenic human, which is non-statutory subject matter. Claims 101-111 are directed to business methods, which are non-statutory.							
Claim Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:							
3. Claim Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).							
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)							
This International Searching Authority found multiple inventions in this international application, as follows:							
1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.							
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.							
As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:							
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:							
Remark on Protest							
No protest accompanied the payment of additional search fees.							



International application No.

PCT/US03/24432

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : C07H 21/02, 21/04; C12N 15/00, 15/09, 15/63, 15/70, 15/74, 5/00, 5/02; G01N 33/53; C12Q 1/68							
US CL: 536/23.1, 24.3; 435/320.1, 325, 7.1, 6; 800/13; 530/350, 387.1 According to International Patent Classification (IPC) or to both national classification and IPC							
B. FIELDS SEARCHED							
Minimum documentation searched (classification system followed by classification symbols) U.S.: 536/23.1, 24.3; 435/320.1, 325, 7.1, 6; 800/13; 530/350, 387.1							
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched .							
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WEST, MEDLINE, BIOSIS, EMBASE, SCISEASRCH, CAPLUS							
C. DOCUMENTS CONSIDERED TO BE RELEVANT							
Category *	Citation of document, with indication, where a	Relevant to claim No.					
A,E	CARLSON A.E. et al. CatSper1 required for evoked Ca2+ entry and control of flagellar function in sperm. PNAS. 09 December 2003, Vol. 100, No. 25, pages 14864-14868, see entire document.						
x	QUILL T. A. et al. A voltage-gated ion channel en	1-20, 29-32					
 Y	PNAS. 23 October 2001, Vol. 98, No. 22, pages 1	26-28, 33-100					
x	REN D. et al. A sperm ion channel required for sp	1-20, 29-32					
 Y	Nature. 11 October 2001, Vol. 413, pages 603-609	26-28, 33-100					
Further documents are listed in the continuation of Box C. See patent family annex.							
• s	pecial categories of cited documents:	"T" later document published after the international filing date or					
	defining the general state of the art which is not considered to be	date and not in conflict with the applic principle or theory underlying the inve					
"E" carlier ap	plication or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be consider when the document is taken alone					
	which may throw doubts on priority claim(s) or which is cited to the publication date of another citation or other special reason (as	"Y" document of particular relevance; the considered to involve an inventive step	when the document is				
"O" document	referring to an oral disclosure, use, exhibition or other means	combined with one or more other such being obvious to a person skilled in the					
	published prior to the international filing date but later than the ate claimed	"&" document member of the same patent	family				
	ctual completion of the international search	Date of mailing of the international search report 20 JUL 2004					
	2004 (23.02.2004) ailing address of the ISA/US	Authorized officer					
	Il Stop PCT, Attn: ISA/US	Bull					
	nmissioner for Patents . Box 1450	Peter Paras, Jr.					
Ale	Telephone No. 703-308-1123						
Facsimile No	o. (703)305-3230						